



This document is scheduled to be published in the Federal Register on 08/21/2013 and available online at <http://federalregister.gov/a/2013-20425>, and on FDsys.gov

DEPARTMENT OF HOMELAND SECURITY

U.S. CUSTOMS AND BORDER PROTECTION

NOTICE OF ISSUANCE OF FINAL DETERMINATION CONCERNING CERTAIN HARD DISK DRIVES AND SELF-ENCRYPTING DRIVES

AGENCY: U.S. Customs and Border Protection, Department of Homeland Security.

ACTION: Notice of final determination.

SUMMARY: This document provides notice that U.S. Customs and Border Protection ("CBP") has issued a final determination concerning the country of origin of certain digital storage devices known as hard disk drives ("HDDs") and self-encrypting drives ("SEDs"). Based upon the facts presented, CBP has concluded that the programming operations performed in the United States, using U.S.-origin firmware, substantially transform non-TAA country HDDs. Therefore, the country of origin of the HDDs and SEDs is the United States for purposes of U.S. Government procurement.

DATE: The final determination was issued on August 14, 2013. A copy of the final determination is attached. Any party-at-interest, as defined in 19 CFR § 177.22(d), may seek judicial review of this final determination on or before [insert date 30 days from date of publication in the Federal Register].

FOR FURTHER INFORMATION CONTACT: Heather K. Pinnock, Valuation and Special Programs Branch: (202) 325-0034.

SUPPLEMENTARY INFORMATION: Notice is hereby given that on August 14, 2013, pursuant to subpart B of Part 177, U.S. Customs and Border Protection

Regulations (19 CFR Part 177, subpart B), CBP issued a final determination concerning the country of origin of certain digital storage devices known as HDDs and SEDs, which may be offered to the U.S. Government under an undesignated government procurement contract. This final determination, HQ H241362, was issued under procedures set forth at 19 CFR Part 177, subpart B, which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511–18). In the final determination, CBP concluded that, based upon the facts presented, the programming operations performed in the United States, using U.S.-origin firmware, substantially transform non-TAA country HDDs. Therefore, the country of origin of the HDDs and SEDs is the United States for purposes of U.S. Government procurement.

Section 177.29, CBP Regulations (19 CFR § 177.29), provides that a notice of final determination shall be published in the *Federal Register* within 60 days of the date the final determination is issued. Section 177.30, CBP Regulations (19 CFR § 177.30), provides that any party-at-interest, as defined in 19 CFR § 177.22(d), may seek judicial review of a final determination within 30 days of publication of such determination in the *Federal Register*.

DATED: August 14, 2013

Sandra L. Bell
Executive Director
Regulations and Rulings
Office of International Trade

Attachment

HQ H241362

MAR OT:RR:CTF:VS H241362 HkP

CATEGORY: Origin

Stuart P. Seidel, Esq.
Baker & McKenzie
815 Connecticut Avenue, NW
Washington, DC 20006-4078

RE: Government Procurement; Trade Agreements Act; Country of Origin of Hard Disk Drives and Self-Encryption Drives; Substantial Transformation

Dear Mr. Seidel:

This is in response to your letter, dated April 24, 2013, requesting a final determination on behalf of Seagate Technology, LLC ("Seagate"), pursuant to subpart B of part 177 of the U.S. Customs and Border Protection ("CBP") Regulations (19 C.F.R. Part 177). Under these regulations, which implement Title III of the Trade Agreements Act of 1979 (TAA), as amended (19 U.S.C. § 2511 et seq.), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government. In reaching our decision, we have taken into account additional information submitted on June 3, 2013.

This final determination concerns the country of origin of three lines of Seagate's Hard Disk Drives ("HDDs") designated as: (1) "Mission Critical"; (2) "Business Critical"; and, (3) "Personal Storage". We note that as a U.S. importer, Seagate is a party-at-interest within the meaning of 19 C.F.R. § 177.22(d)(1) and is entitled to request this final determination. Your request for confidential treatment regarding all cost and price information contained in your request is granted and such information will not be disclosed to the public.

FACTS:

Seagate imports fully assembled HDDs from [non-TAA country] or [non-TAA country]. An HDD is a digital storage device. The products at issue are three lines of HDDs: (1) Mission Critical, sold under the brand names "Cheetah", "Savvio", and "Enterprise Performance"; (2) Business Critical, sold under the brand names "Constellation", "Enterprise Capacity", and "Enterprise Value"; and, (3) Personal Storage, sold under the brand names "Barracuda" and "Desktop".

HDDs are designed in the United States and assembled either in [non-TAA country] or [non-TAA country] from components manufactured by Seagate outside the United States or obtained by Seagate from suppliers in Asia. The assembly process in [non-TAA country] or [non-TAA country] is as follows:

The Head Disk Assembly (“HDA”), usually comprised of two magnetic recording media (“Media”) and three read/write recording heads (“Heads”), a head actuator assembly, and an airtight metal enclosure is assembled in minutes.

The HDA is mated to a printed circuit board (“PCB”) containing disk drive electronics to create an HDD. It is assembled in seconds.

The HDD is loaded into the factory testing system, and testing firmware is downloaded onto the HDD to facilitate media certifications. The HDD stays in a sequence of media certification operations for one or more days, as necessary.

Following successful media certification, the HDD testing firmware is replaced with generic, basic firmware that only allows the HDD’s computer interface functions to be tested. Testing lasts between [xxx] and [xxx].

After testing, the generic firmware is removed and the drive is “forced blocked”, that is, it is blocked from being able to have software loaded onto it or to be further tested. It is stated that force blocking renders the HDD unable to function as a storage drive.

The Heads in the HDA incorporate semiconductor, magnetic, mechanical, and manufacturing process design into an integrated recording reader and writer. It takes approximately [xxx] hours to design a Head, [xxx] of which are allocated to design work in the U.S., [xxx] hours to design work in [non-TAA country], and [xxx] hours to design work in [non-TAA country]. The Media in the HDA incorporates thin film magnetics, mechanical surface design and manufacturing process design. It takes approximately [xxx] hours to design Media, [xxx] of which are allocated to work done in the U.S., [xxx] hours to work done in [TAA country], and [xxx] hours to work done in [non-TAA country].

Fully assembled HDDs are shipped to the United States. According to the information submitted, in their imported condition, HDDs cannot function as storage media. The disk heads cannot move, data cannot be stored or retrieved and, were the HDDs to be installed on computers or networks, they would not be recognized or listed. They do, however, have a rudimentary serial port that enables the HDD to communicate with a computer using a proprietary Seagate protocol so that firmware may be installed and tests performed.

In the U.S., the imported HDD is unblocked and programmed with two types of firmware:

1. Servo Firmware, which controls all motor, preamp and servo functions without which the motors, Media, and Heads will not operate and the HDD will not work; and

2. **Non-Security Controller Firmware**, which manages all communications between the host and target drives as well as all data within the drive. It allows data files to be stored on the Media in the HDD, to be found and listed within applications, and to be saved, retrieved and overwritten.

Installation and testing of the Servo and Non-Security Controller Firmware takes between [xxx] and [xxx], depending on the capacity and model of the HDD. Both types of firmware are developed in the U.S. and [TAA country]. Approximately 80% of the work hours spent on combined firmware design is allocated to work performed in the United States at Seagate's design centers and approximately 20% to work performed in [TAA country]. Combined, the compiled firmware code is approximately 2 MB in size and contains approximately one million lines of code. The firmware loaded onto the HDD in the U.S. makes the HDD a fully functional, generic storage device.

During programming operations, approximately 25% of the generic HDDs are reformatted based on specific customer requirements, such as security features, format sizes, and format modes. Customer-specific code is developed in the United States. Security Controller Firmware, which may be added on to Non-Security Controller Firmware as a part of a customer's code, allows the HDDs to be secured through encryption, which involves enabling an encryption program and security interface, locking the debug ports, and loading credentials and certificates. The Security Controller Firmware is written in the U.S. (85-90%) and in [TAA country] (10-15%), based on architecture totally designed in the U.S. involving thousands of hours and millions of dollars. After the HDDs are configured to customer security requirements, the HDDs are known as self-encrypting drives (SEDs). SEDs encrypt data as it is being written and decrypts data as it is being read.

After programming is complete, the HDDs and SEDs are validated or tested. A final quality assurance inspection is performed, after which the HDDs and SEDs receive new part numbers and labels, and are sold.

ISSUE:

What is the country of origin of Seagate's Hard Disk Drives and Self-Encrypting Drives for purposes of U.S. Government procurement?

LAW AND ANALYSIS:

Pursuant to Subpart B of Part 177, 19 CFR § 177.21 et seq., which implements Title III of the Trade Agreements Act of 1979, as amended (19 U.S.C. § 2511 et seq.), CBP issues country of origin advisory rulings and final determinations as to whether an article is or would be a product of a designated country or instrumentality for the purposes of granting waivers of certain "Buy American" restrictions in U.S. law or practice for products offered for sale to the U.S. Government.

Under the rule of origin set forth under 19 U.S.C. § 2518(4)(B):

An article is a product of a country or instrumentality only if (i) it is wholly the growth, product, or manufacture of that country or instrumentality, or (ii) in the case of an article which consists in whole or in part of materials from another country or instrumentality, it has been substantially transformed into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was so transformed.

See also 19 C.F.R. § 177.22(a).

In rendering advisory rulings and final determinations for purposes of U.S. Government procurement, CBP applies the provisions of subpart B of Part 177 consistent with the Federal Procurement Regulations. See 19 C.F.R. § 177.21. In this regard, CBP recognizes that the Federal Procurement Regulations restrict the U.S. Government's purchase of products to U.S.-made or designated country end products for acquisitions subject to the TAA. See 48 C.F.R. § 25.403(c)(1). The Federal Procurement Regulations define "U.S.-made end product" as:

[A]n article that is mined, produced, or manufactured in the United States or that is substantially transformed in the United States into a new and different article of commerce with a name, character, or use distinct from that of the article or articles from which it was transformed.

In order to determine whether a substantial transformation occurs when components of various origins are assembled into completed products, CBP considers the totality of the circumstances and makes such determinations on a case-by-case basis. The country of origin of the item's components, extent of the processing that occurs within a country, and whether such processing renders a product with a new name, character, and use are primary considerations in such cases. Additionally, factors such as the resources expended on product design and development, the extent and nature of post-assembly inspection and testing procedures, and worker skill required during the actual manufacturing process will be considered when determining whether a substantial transformation has occurred. No one factor is determinative.

In Data General v. United States, 4 Ct. Int'l Trade 182 (1982), the court determined that for purposes of determining eligibility under item 807.00, Tariff Schedules of the United States (predecessor to subheading 9802.00.80, Harmonized Tariff Schedule of the United States), the programming of a foreign PROM (Programmable Read-Only Memory chip) in the United States substantially transformed the PROM into a U.S. article. In programming the imported PROMs, the U.S. engineers systematically caused various distinct electronic interconnections to be formed within each integrated circuit. The programming bestowed upon each circuit its electronic function, that is, its "memory" which could be retrieved. A distinct physical change was effected in the PROM by the opening or closing of the fuses, depending on the method of programming. This physical alteration, not

visible to the naked eye, could be discerned by electronic testing of the PROM. The court noted that the programs were designed by a U.S. project engineer with many years of experience in “designing and building hardware.” While replicating the program pattern from a “master” PROM may be a quick one-step process, the development of the pattern and the production of the “master” PROM required much time and expertise. The court noted that it was undisputed that programming altered the character of a PROM. The essence of the article, its interconnections or stored memory, was established by programming. The court concluded that altering the non-functioning circuitry comprising a PROM through technological expertise in order to produce a functioning read only memory device, possessing a desired distinctive circuit pattern, was no less a “substantial transformation” than the manual interconnection of transistors, resistors and diodes upon a circuit board creating a similar pattern.

In Texas Instruments v. United States, 681 F.2d 778, 782 (CCPA 1982), the court observed that the substantial transformation issue is a “mixed question of technology and customs law.”

In C.S.D. 84-85, 18 Cust. B. & Dec. 1044 (Apr. 2, 1984), CBP stated:

We are of the opinion that the rationale of the court in the *Data General* case may be applied in the present case to support the principle that the essence of an integrated circuit memory storage device is established by programming [W]e are of the opinion that the programming (or reprogramming) of an EPROM results in a new and different article of commerce which would be considered to be a product of the country where the programming or reprogramming takes place.

Accordingly, the programming of a device that changes or defines its use generally constitutes substantial transformation. See also Headquarters Ruling Letter (‘HQ’) 558868, dated February 23, 1995 (programming of SecureID Card substantially transforms the card because it gives the card its character and use as part of a security system and the programming is a permanent change that cannot be undone); HQ 735027, dated September 7, 1993 (programming blank media (EEPROM) with instructions that allow it to perform certain functions that prevent piracy of software constitute substantial transformation); and, HQ 733085, dated July 13, 1990; but see HQ 732870, dated March 19, 1990 (formatting a blank diskette does not constitute substantial transformation because it does not add value, does not involve complex or highly technical operations and did not create a new or different product); HQ 734518, dated June 28, 1993, (motherboards are not substantially transformed by the implanting of the central processing unit on the board because, whereas in Data General use was being assigned to the PROM, the use of the motherboard had already been determined when the importer imported it).

HQ H052325, dated February 14, 2006, concerned the country of origin of a switch and a switch/router. The Brocade 7800 Extension Switch was assembled to completion in China and programmed in the U.S. with U.S.-origin operating system

(OS) software and customer specified firmware and software. The Brocade FX8-24 switch/router contained a PCBA that was assembled and programmed in China and shipped to the U.S., where it was assembled with other components to make the final product. The completed unit was then programmed with U.S.-origin OS software and customer firmware and software. In both cases, the U.S.-origin OS software provided the devices with their functionality. Customs found that in both cases, the processing performed in the United States, including the downloading of the U.S.-origin OS software, resulted in a substantial transformation of the foreign origin components, and that the United States was the country of origin.

In HQ H175415, dated October 4, 2011, hardware components were assembled into complete Ethernet switches in China. The switches were then shipped to the U.S., where they were programmed with EOS software, developed in the U.S. The U.S.-origin EOS software enabled the imported switches to interact with other network switches through network switching and routing, and allowed for the management of functions such as network performance monitoring and security and access control. Without this software, the imported devices could not function as Ethernet switches. As a result of the programming performed in the U.S., with software developed in the U.S., CBP found that the imported switches were substantially transformed in the U.S.

In HQ H215555 (July 13, 2012), fully assembled SheevaPlug microcomputers were imported into the United States, where they were programmed with Pwnie Express proprietary software developed in the U.S. The custom software provided a web-based interface for configuring the microcomputers into Pwn Plugs. In addition, the U.S. software allowed Pwn Plugs to provide secure, persistent and reliable remote access over a variety of network protocols and customer environments. Without the U.S.-origin Pwnie Express software, an imported microcomputer could not function as a Pwn Plug. As a result of the programming performed in the U.S., with software developed in the U.S., we found that the imported microcomputers were substantially transformed in the U.S. and that the country of origin of Pwn Plugs was the United States.

In this case, fully assembled digital storage devices are imported into the United States. Mechanically, the HDDs consist of magnetic heads and a PBC. Their purpose is to store data. Accordingly, in their imported condition they are completely non-functional, in that, their disk heads cannot move, they cannot store or retrieve data, and they cannot be recognized or listed by a computer or network. The imported HDDs only have a basic ability to communicate through a serial port using a proprietary Seagate protocol that is used solely to install firmware and to test the devices. They are programmed in the U.S. with U.S.-origin Servo firmware, which causes the HDD to function mechanically by controlling the motors, preamp and servo mechanisms, which operate the recording media and disk heads in the HDA. They are also programmed in the U.S. with U.S.-origin Controller firmware, which manages all communication between the host and target drives as well as all data management within the drive. In particular, Controller firmware allows data files to be stored on the recording media in the HDA, found and listed within applications, and saved, retrieved and overwritten. Together, the U.S.-origin

firmware causes the imported HDDs to function as digital storage devices. As a result of the programming performed in the U.S., with software primarily developed in the U.S., we find that the imported HDDs are substantially transformed in the U.S. See Data General, C.S.D. 84-85, HQ 215555, HQ 052325, HQ 558868, HQ 735027, and HQ 733085. The country of origin of the HDDs is the United States.

Counsel also argues that SEDs are different products than standard HDDs because they undergo an additional substantial transformation. Specifically, counsel states that the U.S.-origin security firmware with which HDD is programmed in the U.S. converts a standard HDD into a SED, a controlled encryption device for U.S. export control purposes. In addition, counsel states that the SED performs different functions than a standard HDD, has different labeling and part numbers, is marketed and sold in a different market than the HDD (a separate portion of the Seagate website is devoted to security devices such as SEDs), and is priced differently. We agree. To the extent that the HDDs are programmed with additional U.S.-origin security firmware, the country of origin of the SEDs will be the United States.

Nonetheless, this determination concerns whether the HDDs and SEDs are products of a designated country or instrumentality for the purposes of granting waivers of certain “Buy American” restrictions in U.S. law or practice for products offered for sale to the U.S. Government. Consequently, the question of whether additional programming performed in the U.S., using U.S.-origin firmware incorporating an encryption code, transforms the HDD into a SED subject to U.S. export control jurisdiction is outside the scope of this determination.

Please be advised that whether the HDDs may be marked “Made in the U.S.A.” or with similar words, is an issue under the authority of the Federal Trade Commission (“FTC”). We suggest that you contact the FTC, Division of Enforcement, 6th and Pennsylvania Avenue, NW, Washington, DC 20508, on the propriety of markings indicating that articles are made in the United States.

HOLDING:

Based on the facts provided, the programming operations performed in the United States impart the essential character to Seagate’s hard disk drives. As such, the HDDs are considered products of the United States for purposes of U.S. Government procurement.

Notice of this final determination will be given in the Federal Register, as required by 19 C.F.R. § 177.29. Any party-at-interest other than the party which requested this final determination may request, pursuant to 19 C.F.R. § 177.31, that CBP reexamine the matter anew and issue a new final determination. Pursuant to 19 C.F.R. § 177.30, any party-at-interest may, within 30 days of publication of the Federal Register Notice referenced above, seek judicial review of this final determination before the Court of International Trade.

Sincerely,

**Sandra L. Bell, Executive Director
Regulations and Rulings
Office of International Trade**

[FR Doc. 2013-20425 Filed 08/20/2013 at 8:45 am; Publication Date: 08/21/2013]